A.I.A. No. 12-C

2i
Wh

strong,
modern,
reliable Steel

METAL
ROOF DECK
mrdti
TECHNICAL
INSTITUTE

NEW, IMPROVED WHEELING SUPER-RIB STEEL ROOF DECKS

Other Wheeling Construction Products:
Insulated Side Wall Panels (field assembled)
Tensilform® for Concrete Floor and Roof Slabs
Metal Lath and Accessories
SofTite® Cop-R-Loy® Galvanized Sheets
Expanded Metal
Partitions
Walkways and Gratings
Steelcrete® Bank Vault Reinforcing
Acoustical Ceiling Suspension System
For details, call the nearest Wheeling warehouse
or sales office listed on page 8

Wheeling Steel

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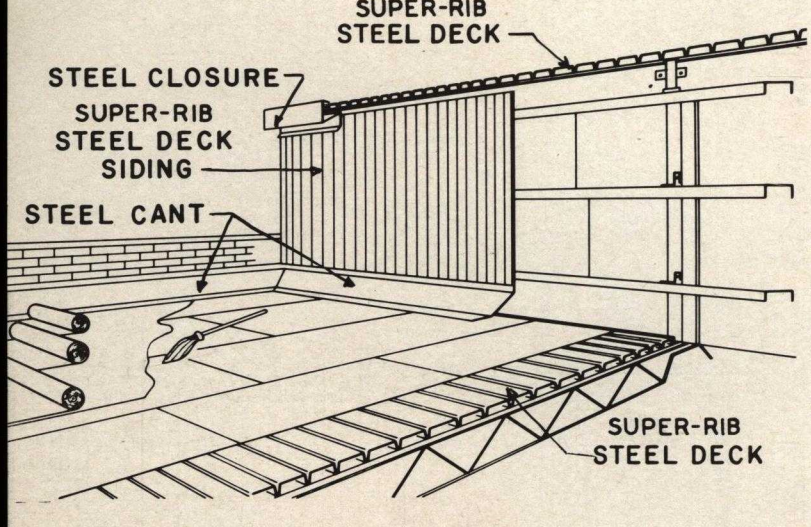
FEB 6 1962
VICTOR IRON WORKS

NEW, IMPROVED WHEELING SUPER-RIB STEEL ROOF DECKS OFFER 21 IMPORTANT ADVANTAGES!

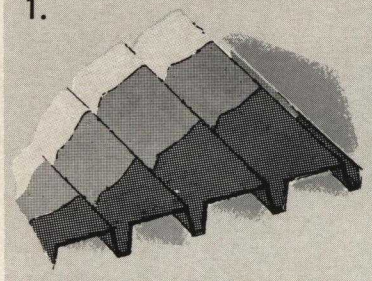
Fully field-proved for hospitals, schools, factories, warehouses, garages and residences, strong Wheeling Super-Rib Decks provide roof and side wall construction that's safe . . . durable . . . lightweight . . . and efficient!

The decks shown here replace famous Wheeling Tri-Rib Deck, which has been top choice in its field for more than a quarter of a century. *Incorporating all of Tri-Rib's advantages,* these two new decks . . . Super-Rib Type A and Super-Rib Type B . . . provide important extra advantages for architect, engineer, builder and building owner. Just look at what these new, improved steel roof decks offer!



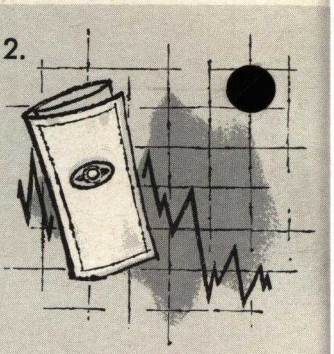
TURN WHEELING STEEL ROOF DECK ON END . . . and it becomes a curtain wall! Here Wheeling Super-Rib Roof Deck forms an efficient and decorative wall panel.

1.



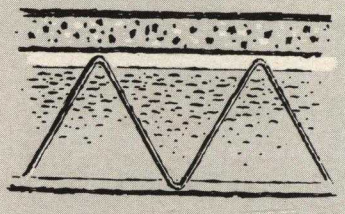
BONDERIZED® AND SPECIALLY PAINTED FOR ADDED PROTECTION

2.



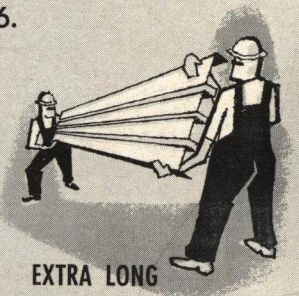
LOW FIRE AND EXTENDED COVERAGE INSURANCE COSTS

5.



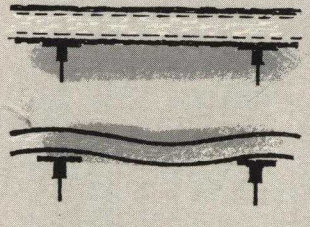
WON'T DUST, FLAKE OR PEEL

6.



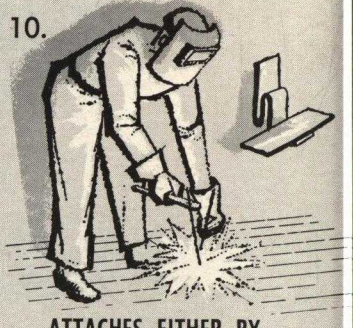
EXTRA LONG LENGTHS AVAILABLE; 2'-0" WIDTHS ADD TO ERECTION ECONOMY

9.



WILL NOT SAG DUE TO WEATHER OR CONSTRUCTION MOISTURES

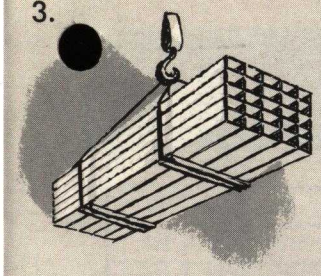
10.



ATTACHES EITHER BY WELDING OR CLIPPING

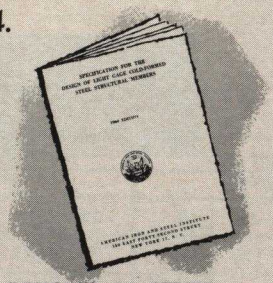
13. Fourteen choices with various gauges (see pages 4 and 5)
14. Easy to estimate 2'-0" covering width
15. Structural grade steel
16. Won't burn
17. Excellent "U" factor (see table on page 8)

3.



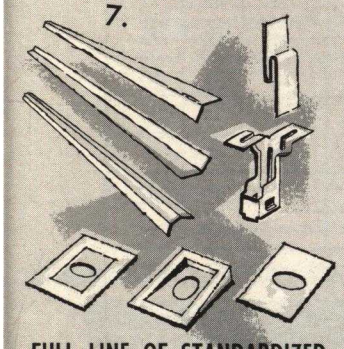
PREPACKAGED FOR EFFICIENT JOB-SITE HANDLING

4.



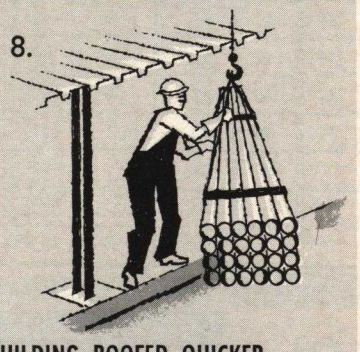
DESIGNED IN STRICT ACCORDANCE WITH 1960 A.I.S.I. LIGHT GAUGE STEEL DESIGN MANUAL

7.



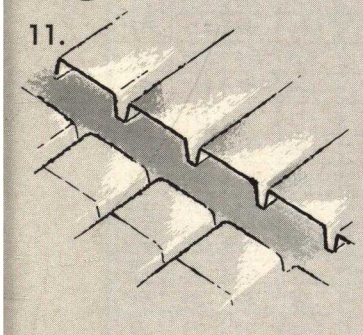
FULL LINE OF STANDARDIZED ACCESSORIES (see pages 6-7)

8.



BUILDING ROOFED QUICKER; EARLIER OCCUPANCY REGARDLESS OF WEATHER OR GEOGRAPHIC LOCATION

11.



SWAGED ENDS FOR SNUG FIT

12.

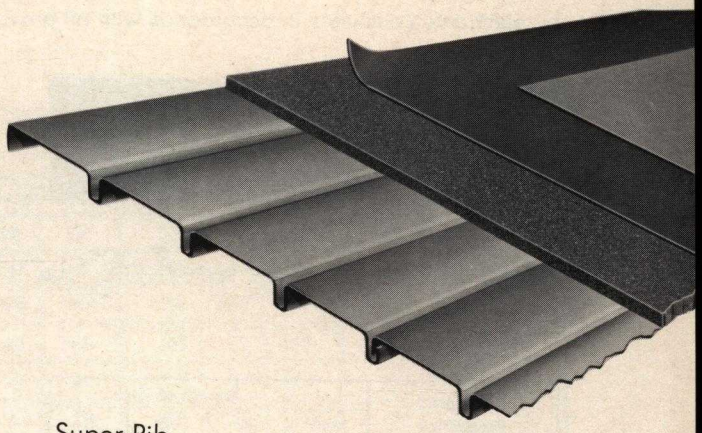
CUTS CONSTRUCTION COSTS

18. Wheeling's newer equipment produces close manufacturing tolerances

19. Allows lighter structural design

20. Adds rigidity to structure

21. Light and strong



Super-Rib

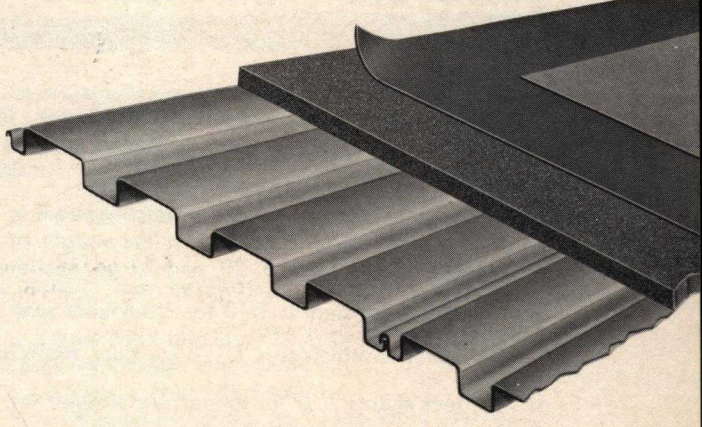
TYPE A

Narrow ribs assure maximum adhesive contact surface for insulation . . . permits the safe use of all types of insulating materials . . . greater protection against wind uplift . . . allow crafts to walk on insulated or roofed surfaces with minimum danger of damage. When vapor barrier is required, narrow rib openings offer greater protection from damage by foot and construction traffic plus additional protection against wind uplift. Specially designed cross section assures ample room inside of rib for fast top welding. Recommended for purlin spacings up to 9′-0″; see Wheeling's new Type B section below.

Super-Rib

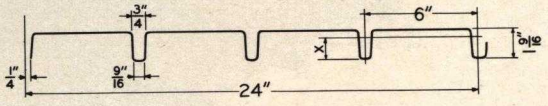
TYPE B

Designed for a safe total uniform load that has a substantially higher percentage of carrying capacity than narrow-ribbed steel decks. Wide rib design distributes compression and tension stresses more symmetrically, thereby assuring better distribution of steel which means greater strength and rigidity. Recommended for purlin spacings up to 12′-0″ (see table on page 4). This deck is designed for greater economy because it permits use of lighter material over greater spans—a certain money-saver. Attractive design makes this deck especially suited for wall paneling.



Wheeling Super-Rib Roof Deck properties have been derived by electronic computers in accordance with all provisions of the 1960 edition of the AISI specifications for the design of light-gauge, cold-formed steel structural members.

TYPE A
Steel Roof Deck (NORMAL INSTALLATION)



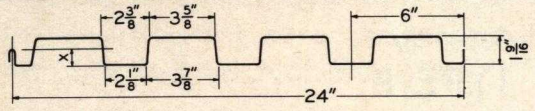
Sectional Properties	Unit	Gauge of deck 22	20	18
Decimal Thickness	Ins.	.0299	.0359	.0478
Weight Painted	PSF	1.88	2.26	3.01
Weight Galvanized	PSF	1.97	2.34	3.09
Neutral Axis "X"	Ins.	1.018	1.062	1.129
I (for load)	In^4	.117	.150	.220
S	In^3	.115	.141	.195
I (for defl.)	In^4	.128	.163	.234
A (for Section)	In^2/FT	.538	.644	.859

Maximum sheet lengths controlled by shipping limitations.

safe total uniform loads

	Single span gauges			Dual span gauges			Continuous span gauges		
spans	22	20	18	22	20	18	22	20	18
4'-0	96	118	162	96	118	162	119	147	203
4'-6	76	93	128	76	93	128	94	116	160
5'-0	61	75	104	61	75	104	76	94	130
5'-6	51	63	86	51	63	86	63	78	101
6'-0	42	52	72	42	52	72	53	65	90
6'-6	36	45	61	36	45	61	45	56	77
6'-8	34	42	58	34	42	58	43	53	73
7'-0	31	38	53	31	38	53	39	48	66
7'-6		33	46		33	46	34	42	58
8'-0		29	39		29	41	30	37	51
8'-6			34			36		33	45
9'-0			31			32		29	40

TYPE B
Steel Roof Deck (NORMAL INSTALLATION)



Sectional Properties	Unit	Gauge of deck 22	20	18	16
Decimal Thkns.	Ins.	.0299	.0359	.0478	.0598
Weight Painted	PSF	1.93	2.31	3.09	3.86
Wt. Galvanized	PSF	2.01	2.40	3.17	3.94
Neutral Axis "X"	Ins.	.732	.764	.819	.869
I (for load)	In^4	.174	.221	.323	.435
S	In^3	.202	.265	.394	.501
I (for defl.)	In^4	.188	.239	.350	.462
A (for Section)	In^2/FT	.551	.660	.880	1.103

Maximum sheet lengths controlled by shipping limitations.

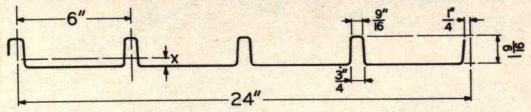
safe total uniform loads

	Single span gauges				Dual span gauges				Continuous span gauges			
spans	22	20	18	16	22	20	18	16	22	20	18	16
4'-0	169	221	329	418	169	221	329	418	211	276	411	522
4'-6	133	175	258	330	133	175	260	330	166	218	325	413
5'-0	106	133	190	249	108	141	210	267	135	177	263	334
5'-6	82	102	146	190	89	117	174	221	111	146	217	276
6'-0	65	81	114	149	75	98	146	186	94	123	183	232
6'-6"	53	65	92	119	64	84	124	158	80	103	147	192
6'-8	50	61	86	111	61	80	118	150	75	96	137	178
7'-0	44	54	76	98	55	72	107	136	68	84	120	156
7'-6	38	46	63	81	48	63	93	119	57	70	99	128
8'-0	32	39	54	69	42	55	82	104	48	59	88	108
8'-6		34	47	59	37	49	71	92	42	51	71	92
9'-0		30	41	52	33	44	62	79	36	44	62	79
9'-6			36	45	30	39	54	69	32	39	54	69
10'-0			33	40		35	48	60		35	48	60
11'-0							38	48			38	48
12'-0								39				39

NOTES:

1. Deck is customarily applied with ribs down. Inverted deck, however, is often used for soffits, ceilings, sidings, and as permanent form for reinforced concrete slabs. When wet concrete, impact, and/or construction loads exceed tabular loads, provide shoring.
2. No tabular load above will produce a stress in excess of 20,000 psi or a deflection due to **live load** greater than 1/240th of the span. Dead load includes the weight of deck, insulation, and built-up roof, and is assumed at 11, 10, 9, and 9 PSF respectively for 16, 18, 20, and 22 ga. sections for both Type A and Type B decks, normal or inverted installations.
3. Moment coefficient is 1/10 for continuous span condition (three or more spans) and 1/8 for single and dual spans.
4. Deflection coefficient is 1/128 for dual, triple, etc. spans, and 5/384 for single spans.
5. All deck sheets 7'-0" or longer are swaged for smooth end lap unless otherwise noted. Sheets under 7'-0" are not swaged except by special arrangement.

TYPE A
Steel Roof Deck (INVERTED INSTALLATION)



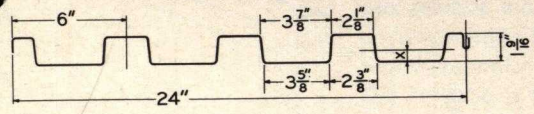
Sectional Properties	Unit	Gauge of deck 22	20	18
Decimal Thickness	Ins.	.0299	.0359	.0478
Weight Painted	PSF	1.88	2.26	3.01
Weight Galvanized	PSF	1.97	2.34	3.09
Neutral Axis "X"	Ins.	.382	.385	.392
I (for load)	In^4	.154	.185	.247
S	In^3	.127	.153	.203
I (for defl.)	In^4	.154	.185	.247
A (for section)	In^2/FT	.538	.644	.859

Maximum sheet lengths controlled by shipping limitations.

safe total uniform loads

	Single span gauges			Dual span gauges			Continuous span gauges		
spans	22	20	18	22	20	18	22	20	18
4'-0	106	127	169	106	127	169	132	159	211
4'-6	84	100	134	84	100	134	105	126	167
5'-0	68	81	108	68	81	108	85	102	135
5'-6	56	67	89	56	67	89	70	84	112
6'-0	47	57	75	47	57	75	59	71	94
6'-6	40	48	64	40	48	64	50	60	80
6'-8	38	46	61	38	46	61	48	57	76
7'-0	35	42	55	35	42	55	43	52	69
7'-6	30	36	48	30	36	48	38	45	60
8'-0		32	41		32	42	33	40	53
8'-6			36			37		35	47
9'-0			32			33		30	42

TYPE B
Steel Roof Deck (INVERTED INSTALLATION)



Sectional Properties	Unit	Gauge of deck 22	20	18	16
Decimal Thkns.	Ins.	.0299	.0359	.0478	.0598
Weight Painted	PSF	1.93	2.31	3.09	3.86
Wt. Galvanized	PSF	2.01	2.40	3.17	3.94
Neutral Axis "X"	Ins.	.605	.630	.668	.699
I (for load)	In^4	.199	.252	.360	.468
S	In^3	.202	.260	.382	.507
I (for defl.)	In^4	.213	.268	.375	.468
A (for Section)	In^2/FT	.551	.660	.880	1.103

Maximum sheet lengths controlled by shipping limitations.

safe total uniform loads

	Single span gauges				Dual span gauges				Continuous span gauges			
spans	22	20	18	16	22	20	18	16	22	20	18	16
4'-0	168	217	318	423	168	217	318	423	210	271	398	528
4'-6	133	171	252	334	133	171	252	334	166	214	314	417
5'-0	108	139	203	253	108	139	204	270	135	174	255	338
5'-6	89	113	155	192	89	115	168	223	111	143	210	279
6'-0	73	89	122	151	75	96	141	188	94	121	177	235
6'-6	59	72	98	121	64	82	121	160	80	103	151	194
6'-8	55	67	92	113	61	78	115	152	76	98	143	181
7'-0	49	60	80	99	55	71	104	138	69	89	127	158
7'-6	41	50	67	82	48	62	91	120	60	77	105	130
8'-0	36	43	57	70	42	54	80	106	53	65	89	109
8'-6	31	37	49	60	37	48	70	93	46	56	76	93
9'-0		33	43	52	33	43	63	80	40	49	65	80
9'-6			38	46	30	38	56	69	36	43	57	69
10'-0			34	41		35	50	61	32	38	50	61
11'-0							40	48			40	48
12'-0								40				40

6. Use the following formulae to figure total load capacity of deck when deflection is *not* considered, (fs = 20,000 psi = maximum design stress).

Single and Dual Spans

$$w = \frac{S \times 13333}{L^2}$$

Continuous (three or more) *Spans*

$$w = \frac{S \times 16667}{L^2}$$

w = Maximum *Total* Load, PSF
S = Section Modulus, ins.^{3} (see table above)
L = Span in Feet (decimally)

7. Use the following formulae to figure amount of deflection in inches realized from application of live load on deck:

Single Spans

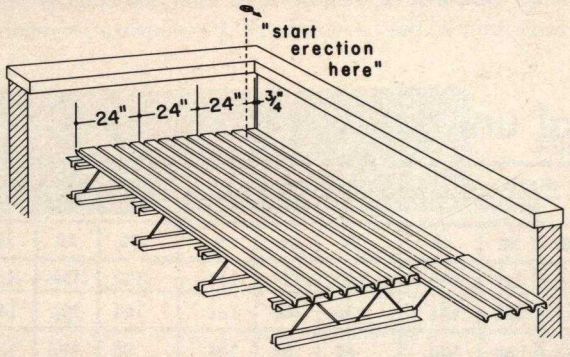
$$Dmax = \frac{22.5\ w_1\ L^4}{E\ I}$$

Dual, Triple, etc. Spans

$$Dmax = \frac{13.5\ w_1\ L^4}{E\ I}$$

w_1 = Live Load applied, PSF (pounds per square foot)
Dmax = Maximum Deflection, ins.
L = Span in Feet (decimally)
I = Moment of Inertia, ins.^{4} (see table above)
E = 29,000,000 for steel

installation information

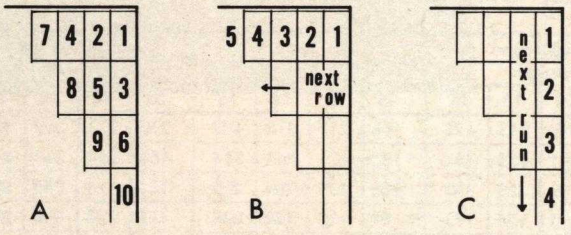


ERECTION DIAGRAMS

Deck shall be placed in accordance with erection diagrams supplied for each project as sheets are factory cut and identified to meet job requirements, allowing 2″ minimum end laps. Use snapped chalk line at reasonable 2′-0″ multiples for proper alignment.

PLACEMENT

Types A and B of Wheeling Super-Rib Decks are erected similarly. Begin layout at indicated starting point. Considering joists as numbered from left to right, starting point always occurs at far left end of first joist. The first sheet is positioned as



noted on the drawing at the starting point with die set end located away from the corner and upstanding hook end of side lap away from wall. Succeeding sheets may be erected in any of three patterns, "A," "B" or "C" above. Pattern "A" is self-explanatory and is the preferred scheme. For patterns "B" or "C," after a sizable row or run is placed, the erector should then place the next adjacent rows or runs individually until all deck is layed. Keep sheets in alignment. Caution: In pattern "C," when placing second runs, position downstanding side lap at die set end of sheet between rib and upstanding leg of previous run for correct alignment and ease in placement. Do not use unwelded areas as staging or for storing materials.

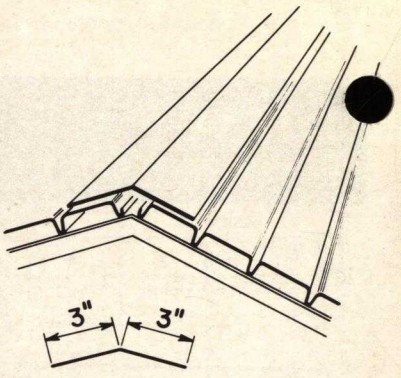
WELDING

Electric arc welding is the best and most economical method for attaching Wheeling deck to structural supports. All welds are made from the top of deck down through the ribs. Plug welds should be spaced not over 12″ on center over all supports. Plug welds at side or end laps should penetrate all thicknesses of material and fasten all sheets to the structural supports. Care in the selection of electrodes and amperage should always be exercised to insure positive attachment. With Super-Rib Type B, sidelaps should be fastened together by button punching side lap ribs between supports when spans exceed 7′-0″. For structural continuity, button punch 3′-0″ on center.

ACCESSORIES

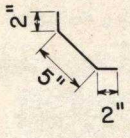
Ridge and Valley Plates

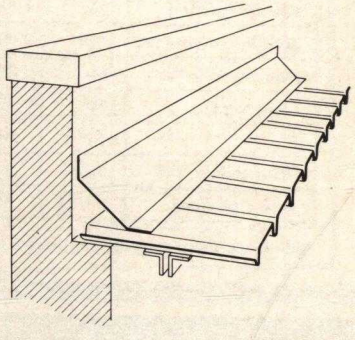
Plates should be used at ridges and valleys whenever the slope exceeds ½″ per foot. They are normally supplied as 20 gauge galvanized steel in 10′-0″ lengths.



Cant Strip

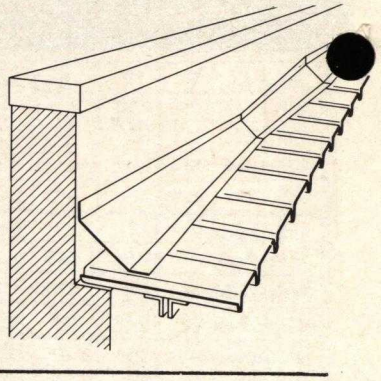
Cant strips are used in conjunction with parapet walls. They are normally supplied as 20 gauge galvanized in 10′-0″ lengths.





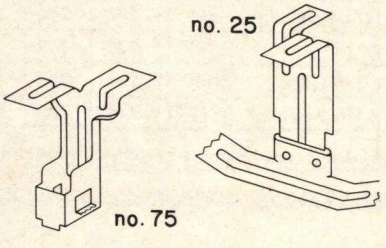
Tapered Cant Saddle

Tapered cant saddles are used to direct water to sumps in instances where roofs have a pitch of ½″ per foot or greater. They are normally supplied as 20 gauge galvanized in 10′-0″ lengths.



Insulation Clips

Insulation clips holds 1″ rigid insulation in position without adhesive. Use No. 75 with Type A deck and No. 25 with Type B deck.



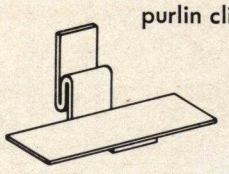
Quantities Required

Uplift	Clips per 2′ x 4′ insulation panel	Clips Per 100 Sq. Ft.
30 lbs/sq. ft.*	2	29
45 lbs/sq. ft.*	3	30
60 lbs/sq. ft.*	4	50

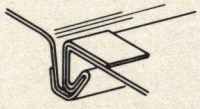
(In each case, specify 1 or 2 extra per 100 sq. ft. to cover field loss.)
*For total uplift resistance add weight of insulation and roofing materials.

Purlin Clips

When deck plates are not to be welded, purlin clips shall be used at every support. Intermediate clips lock sheets together at side lap at mid span. Use one intermediate clip up to 5′-0″ spans and two for spans greater than 5′-0″ evenly spaced between supports. When Type B deck is used, button punching will replace intermediate clips.



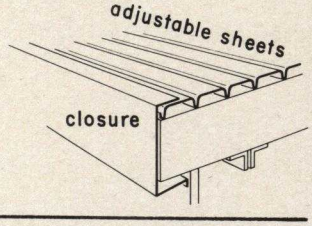
purlin clip



intermediate clip

Closure Plates and Adjustable Sheets

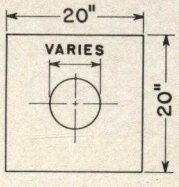
Closures finish the deck job by covering the roof edges and eaves. Adjustable sheets cover any width up to 23″ and are available in three styles.



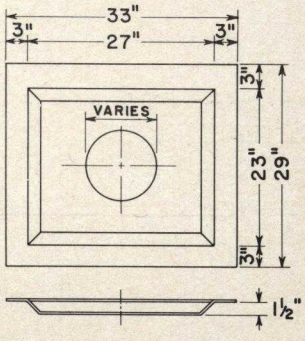
Sump Pans and Plates

Three types of sump pans fill any roof sump requirement. Wide flanges permit secure welding to the steel deck. Hole sizes for drains can be specified for the type of sump used, and may be factory or field cut.

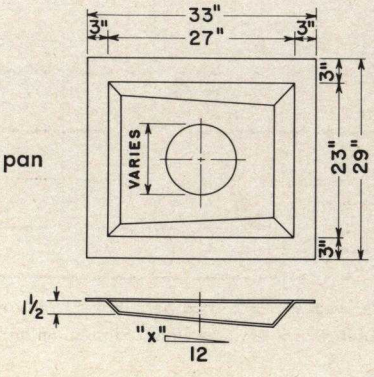
sump plate



recessed level pan



recessed sloped pan



suggested specifications

1 SCOPE —

This section of the specifications shall include all materials, equipment, and labor for installation of steel roof deck and roof deck accessories. Excluded are such items as deck supports, field painting, flashings, gutters, poured saddles, or other such miscellaneous items specified elsewhere.

2 MATERIAL —

Steel deck shall be Wheeling Super-Rib (specify Type A or Type B, .or if both are required state Roof Deck) as manufactured by the Wheeling Corrugating Company, Wheeling, W. Va. Type and gauge shall be as indicated on the drawings (or if not so specified) type and gauge shall be those which conform to the following design provisions:

3 DESIGN —

Basic steel to be ASTM Designation: A-245-58-T, Grade C light gauge structural quality, cold rolled carbon steel. The maximum fiber stress shall not exceed 20,000 psi under total dead and live load of_____pounds per square foot and deflection shall not exceed 1/240th of the span under a live load of_____pounds per square foot. Properties shall conform to AISI "Specifications For The Design Of Light Gauge Cold Formed Steel Structural Members" 1960 Edition. The manufacturer's load tables shall have the approval of the metal roof deck technical institute. Where possible sheets shall extend over three or more supports.

4 SHOP FINISH (select one)

(a) Steel shall be thoroughly cleaned in a chemical bath, rinsed, dried and properly prepared for a Bonderized surface. After Bonderizing, the surface shall be roller coat painted to insure an even protective covering with one coat of thermo-setting gray vinyl type primer especially developed for prime coating structural members. It shall have a high reflectance value and shall be of such a composition to be easily recoated using any commercially available maintenance paint finish. When water base paints are used for field coat, all abraded surfaces and scratches shall be sealed with an oil base paint.

(b) Galvanized steel deck shall be structural grade C standard black gauge coated before fabrication in continuous strip by the Cook-Norteman process. Coating shall conform to ASTM A93-55T.

5 ACCESSORIES —

Ridge and valley plates, cant strips, saddles, sump plates shall be supplied as required on contract drawings.

6 INSTALLATION —

Deck shall be anchored by welding, directly through the bottom of the rib to all structural supports at 12″ on center. When spans exceed 7′-0″ side laps shall be fastened together at mid span using welds or intermediate clips for Type A or button punching for Type B. For structural continuity, button punch 3′-0″ on center.

SUPER-RIB STEEL ROOF DECKS

fire resistive ratings for steel roof deck

	Roof[2]	Suspended Ceiling of Metal Lath and Plaster	Fire Resistance Rating	Authority
STEEL ROOF DECK ASSEMBLIES	2" vermiculite concrete	1" vermiculite gypsum plaster[1]	4 hours	National Bureau of Standards Test No. 60, Report No. TR 10235; FP 2688, dated 1/31/49
	1" insulation board of shredded wood bonded with Portland cement	1" vermiculite gypsum plaster[1]	3 hours	
	1" insulation board of felted glass fiber	1" vermiculite gypsum plaster[1]	2 hours	
	1½" wood fiber board insulation	1" sanded gypsum plaster, 1:2 mix	2 hours	NBS Test No. 58 dated 11/29/46
	1½" wood fiber and cement binder	⅞" sanded gypsum plaster, 1:2 mix	2 hours	NBS Test No. 56 dated 11/27/49
	1" wood fiber board insulation	¾" sanded gypsum plaster, 1:2, 1:3 mix	1½ hours	NBS Test No. 57 dated 1/15/46

[1] 100 lbs. gypsum to 2½ cu. ft. vermiculite aggregate for scratch and brown coats.

[2] Equivalent insulation permissible.

seismic design data

Design for seismic and lateral forces requires special welding patterns which may vary for every structure. For optimum design contact your nearest Wheeling Corrugating Company Sales Office. Please submit architectural and structural drawings, desired roof loads, local seismic load factors and allowable lateral wall deflections. We should also receive a copy of the controlling seismic code with the inquiry. Wheeling Corrugating Company will make recommendations concerning choice of deck and weld spacing to meet your specific requirements.

insulating values for various types of roof construction

Description of Roof Construction	Gauge or Thickness in inches	"U"* factor
Wheeling Corrugating Company's steel decks with 1" insulation board on top of deck	16 ga., 18, 20 ga. and 22 ga.	0.25
Precast Reinforced lightweight concrete tile	2¾" 3½"	0.52 0.49
Reinforced concrete slab	2" 4" 6"	0.82 0.72 0.64
Wood Deck	1" 2"	0.49 0.32
2" or 2½" gypsum poured on ½" gypsum board form	2½" 3"	0.38 0.34
Reinforced Gypsum Plank—2" thick (metal edged)	2"	0.58
Precast Reinforced Gypsum Tile (3" solid short span)	3"	0.48
Laminated gypsum board—2, 3 or 4½" piles	1" 1½" 2"	0.57 0.47 0.40

*U factors include ⅜" thick built-up roofings.

WC-241-Rev.

Wheeling Steel

WHEELING CORRUGATING COMPANY

IT'S WHEELING STEEL!

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Chicago 12, Ill.
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COLUMBUS
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Columbus 12, Ohio
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DETROIT
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N. Kansas City 16, Mo.
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Davenport 9-1600

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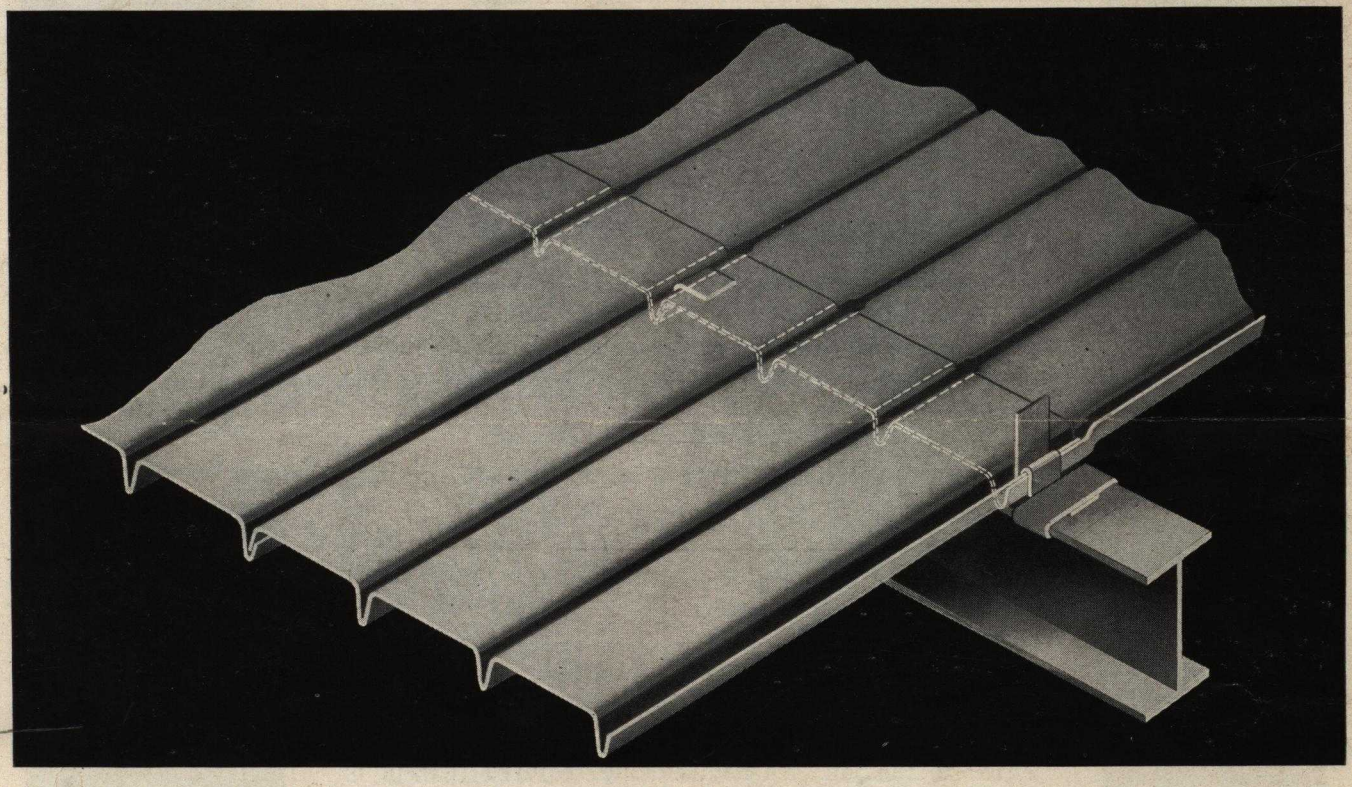
WHEELING
1134-40 Market St.
Wheeling, W. Va.
Cedar 3-2200

Printed in U.S.A. 1961

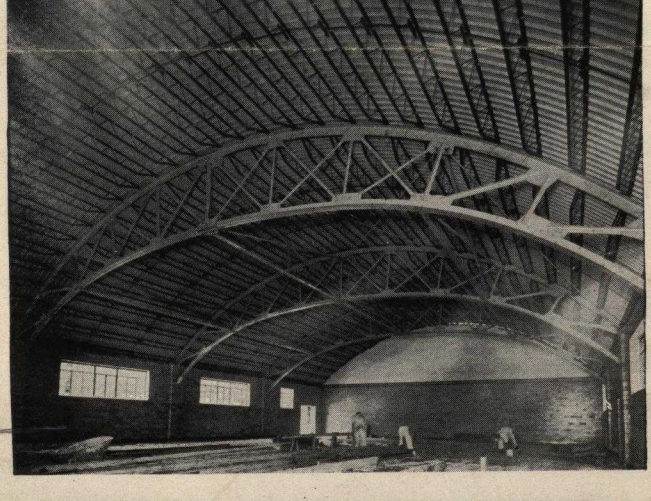
TRI-RIB STEEL ROOF DECK

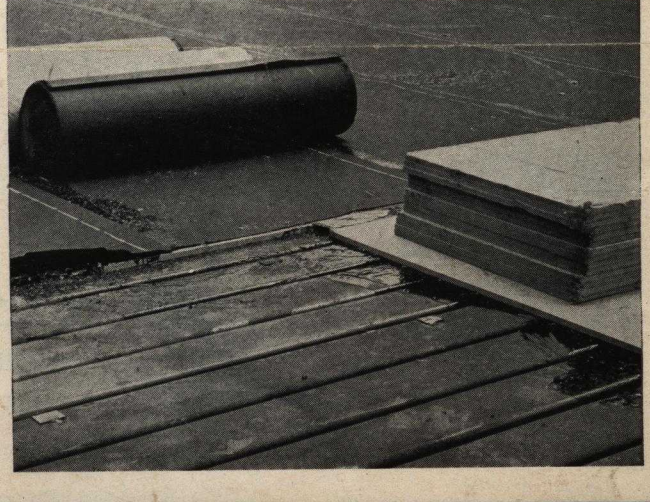
3c
6



STEEL ROOF DECKS FOR GREATER ECONOMY

Wheeling Tri-Rib Steel Roof Deck provides a rigid, firesafe and economical roofing foundation that can be erected in record time. After the deck is erected in place, the insulation is then applied with a coat of high temperature asphalt. The built-up roofing is then laid on the insulation, providing a highly insulated, firesafe roofing that will not warp or crack.





This form cancels and supercedes all previous literature on this subject.

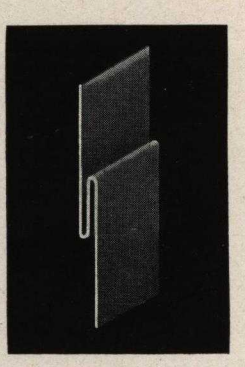
WHEELING CORRUGATING COMPANY
WHEELING, W. VA.

TRI-RIB STEEL ROOF DECK

Tri-Rib is fabricated in depths of 1½, 1¾, 2, and 2½ in. and is available in 18, 20 or 22-Gauge Painted COP-R-LOY.

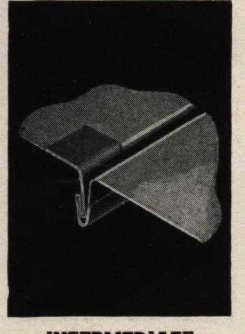
A standard width of deck sheet provides for 18-in. coverage—the maximum length of deck sheet is 22 ft. 6 in.

Each Deck Sheet receives one standard factory baked-on coat of paint after fabrication.



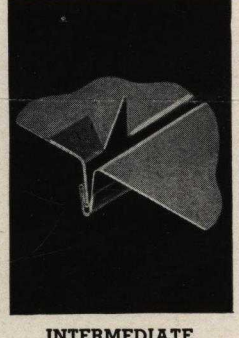
INTERMEDIATE CLIP

Used between supports to tie the sides of the roof deck plates together.



INTERMEDIATE CLIP

Illustration of clip in use.



INTERMEDIATE CLIP

Slit for insulation, pronged for holding insulation in place on pitched roofs.

ADVANTAGES OF TRI-RIB STEEL ROOF DECK

All deck sheets are available in lengths up to and including 22 ft. 6 in. The importance of the long lengths should be emphasized as the ability of deck sheets to span continuously over three or more purlins results in a more rigid roof deck installation.

Economy in erection of 22 ft. 6 in. lengths—fewer sheets to handle.

All deck units 18 in. wide, thus reducing to a minimum the number of units to be erected.

Any span up to 10 ft. can be provided for on an economical basis.

Fitted to the job. No field cutting required (except on very irregular areas.)

Erection operations are performed from the top of the deck—the safe and easy method of installation.

A rigid, even surface due to a minimum number of end laps.

Overlapping ends never have to be forced in place as provision is made for accurate nesting of end laps.

May be clipped or welded to purlins. Accessories such as Cant Strip, Sidewall Plate and Hip or Valley Plate may be fastened to the roof deck with self-tapping screws or by welding.

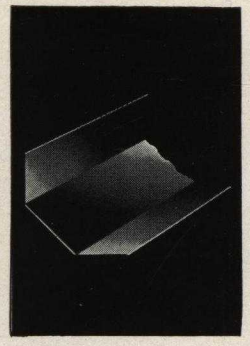
Extra long life insured by painted COP-R-LOY, the Copper Alloyed Steel.

TRI-RIB ROOF DECK

EASILY HANDLED

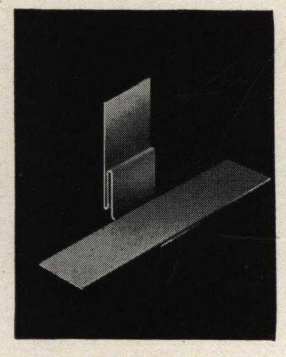
QUICKLY APPLIED

FIRE SAFE



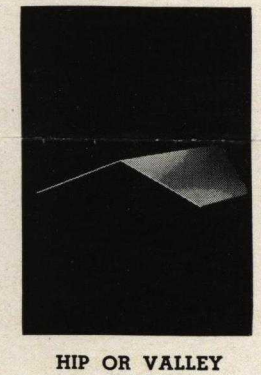
CANT STRIP

Closes the space between the end of the roof deck plate and the wall.



PURLIN CLIPS

For attaching roof deck to purlins.

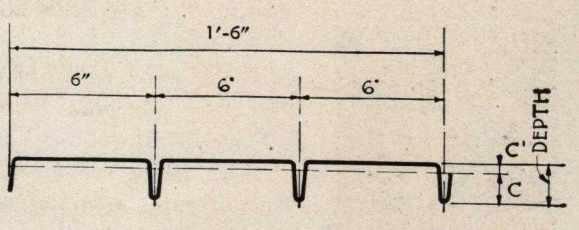


HIP OR VALLEY PLATE

Closes the space between the ends of deck plates and makes a continuous roof surface.

PROPERTIES OF TRI-RIB DECK

Depth	Gauge	Per Foot Width: Moment of Inertia (in) 4	Per Foot Width: Section Modulus (in) 3	Per Foot Width: Resisting Moment (in lbs.)	C Ins.	C' Ins.
1½"	18	.1784	.149	2680	1.195	.305
	20	.1333	.111	1998	1.198	.302
	22	.1129	.094	1692	1.198	.302
1¾"	18	.2704	.198	3564	1.37	.38
	20	.2004	.146	2630	1.37	.38
	22	.1695	.124	2230	1.37	.38
2"	18	.3864	.2516	4520	1.537	.463
	20	.2860	.1862	3350	1.536	.464
2½"	18	.7001	.375	6750	1.86	.64
	20	.5164	.277	5000	1.86	.64



TYPICAL CROSS SECTION OF TRI-RIB ROOF DECK

SAFE UNIFORM LOAD PER SQUARE FOOT

fs = 18,000 Lbs. per Square Inch

Depth	Gauge	Weight per Sq. Ft.	SPAN 4'-0" M= WL 10	4'-0" M= WL 8	4'-6" M= WL 10	4'-6" M= WL 8	5'-0" M= WL 10	5'-0" M= WL 8	5'-6" M= WL 10	5'-6" M= WL 8	6'-0" M= WL 10	6'-0" M= WL 8	6'-6" M= WL 10	6'-6" M= WL 8	7'-0" M= WL 10	7'-0" M= WL 8	7'-6" M= WL 10	7'-6" M= WL 8	8'-0" M= WL 10	8'-0" M= WL 8	8'-6" M= WL 10	8'-6" M= WL 8	9'-0" M= WL 10	9'-0" M= WL 8	9'-6" M= WL 10	9'-6" M= WL 8	10'-0" M= WL 10	10'-0" M= WL 8
1½"	18	2.89	139	111	110	88	89	71	73	59	62	49	52	42	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	20	2.18	104	83	82	65	66	53	55	44	46	37	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	22	1.81	88	70	69	55	56	45	46	37	39	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1¾"	18	3.07	185	148	146	117	119	95	98	79	82	66	70	56	60	48	52	42	46	37	...	...	...	...	...	...	...	...
	20	2.30	137	109	108	86	87	70	72	58	61	48	50	41	44	35	...	...	...	...	...	...	...	...	...	...	...	...
	22	1.92	116	93	91	73	74	59	61	49	51	41	44	35	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2"	18	3.26	...	...	...	...	...	...	...	...	104	83	87	70	77	61	66	53	59	47	52	41	46	37	...	...	...	...
	20	2.45	...	...	...	...	...	...	...	...	77	62	65	52	57	45	49	39	43	35	...	...	...	...	...	...	...	...
2½"	18	3.57	...	...	...	...	...	...	...	...	...	...	...	...	114	92	100	80	87	70	77	62	69	55	62	49	56	45
	20	2.68	...	...	...	...	...	...	...	...	...	...	...	...	85	68	74	59	65	52	57	46	51	41	46	36	41	...

Safe Uniform Load Includes the Weight of the Deck. Safe Uniform Loads given will not produce deflections exceeding 1/250 of the span length.

SPECIFICATIONS FOR WHEELING TRI-RIB STEEL ROOF DECK

MATERIAL

Wherever steel roof deck is shown or called for on the plans it shall be _____ Gauge, Painted COP-R-LOY, _____ in. deep. Tri-Rib as manufactured by WHEELING CORRUGATING COMPANY, Wheeling, West Virginia. Wherever possible the deck sheets shall be furnished in sufficiently long lengths to span continuously over three or more purlins.

All end laps shall be of the overlapping type, and shall occur only at purlin points.

NOTE:—If Hip or Valley Plate, Cant Strip or other Accessories are to be furnished as part of the steel deck, specifications should so state.

PAINTING

Roof Deck and Accessories shall receive one standard factory baked-on coat of paint after fabrication.

ERECTION (For Clipped Jobs)

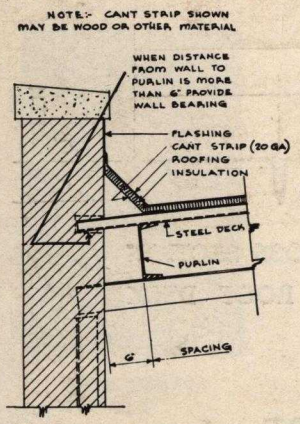
All steel roof deck sheets shall be attached to purlins by means of clips. One purlin clip shall be used at each purlin at the side of each deck sheet. Provide one intermediate clip at all side laps for spans up to 5 ft.-0 in., and two intermediate clips for all spans exceeding 5 ft.-0 in.

ERECTION (For Welded Jobs)

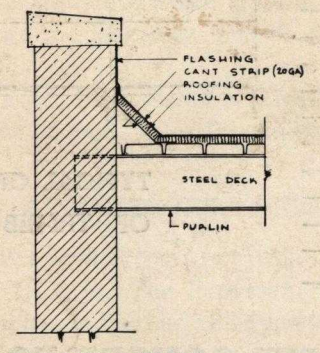
All steel roof deck sheets shall be attached to purlins by means of electric arc welding. One ⅛-in. fillet weld, ¾ in. long, shall be provided at each purlin at the side of each deck sheet. Wherever end laps occur, the upper deck sheet shall be welded to the lower deck sheet at the side of each deck sheet.

Side laps shall be fastened together by electric arc welding, one weld to be used on spans up to 5- ft.-0 in., and two welds to be used on spans exceeding 5 ft.-0 in.

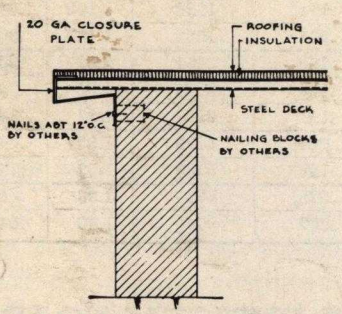
WHEELING TRI-RIB DECK DETAILS



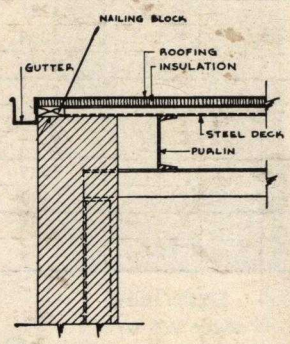
PARAPET WALL DETAIL
(END WALL)



PARAPET WALL DETAIL
(SIDE WALL)

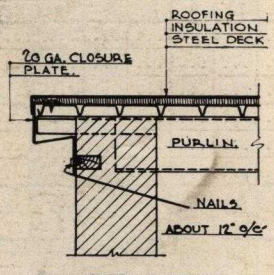


SIDE WALL
(SHOWING CLOSURE PLATE)

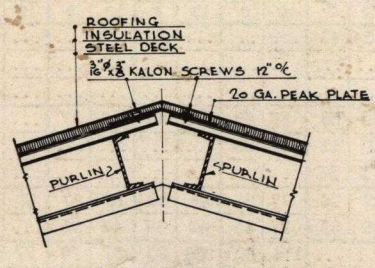


SIDE WALL
(SHOWING GUTTER DETAIL)

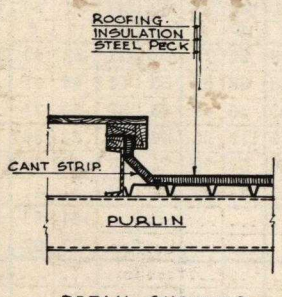
WHEELING "TRI-RIB" DECK DETAILS (A)



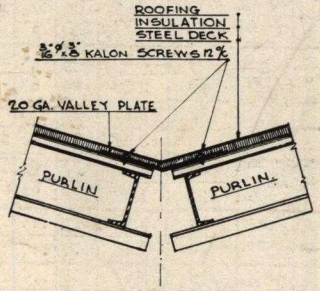
·WALL·DETAIL·WITH·OUTLOOKER·



DETAIL·SHOWING·PEAK·PLATE·

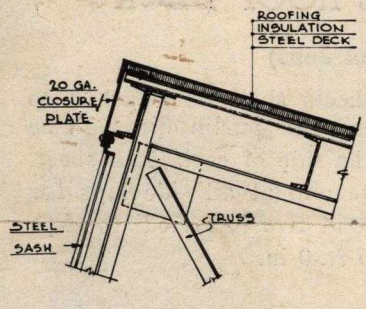


·DETAIL SHOWING·SCUTTLE·DETAIL·

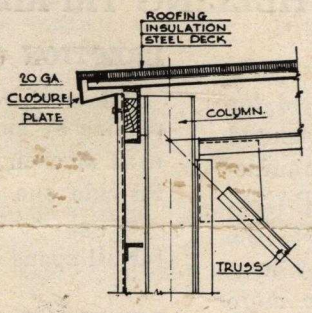


DETAIL·SHOWING·VALLEY PLATE·

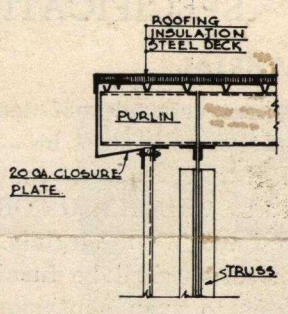
WHEELING "TRI-RIB" DECK DETAILS (B)



DETAIL SHOWING·MONITOR·



SIDE·WALL·DETAIL



·END·WALL·DETAIL·

WHEELING "TRI-RIB" DECK DETAILS (C)

Above are illustrated some of the details which are frequently encountered in actual practice. We furnish for each job complete detailed drawings of each piece, together with a complete set of placing drawings.

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